

# Creating a Complete React Application

## Overview

In this lab you'll use the Create React App tool to create a "complete" React application for the library scenario. This will act as the basis for all subsequent labs in the course.

## Source folders

- ReactDev\Student\08-CreatingReactApp
- ReactDev\Solutions\08-CreatingReactApp

## Roadmap

Here's a brief summary of the exercises in this lab. More detailed instructions follow later in this lab document:

1. Creating a complete application
2. Running the application in "development" mode
3. Building and running the application in "production" mode
4. Tidying up the application code

### **Exercise 1: Creating a complete application**

Open a Terminal window and go to the following folder:

```
ReactDev\Student\08-CreatingReactApp
```

In this folder, run the following command to create a React application named `library-app` in TypeScript:

```
npx create-react-app library-app --template typescript
```

After the application has been created, open a text editor and familiarize yourself with all the generated code.

### **Exercise 2: Running the application in "development" mode**

In the Terminal window, go to the `library-app` subfolder and run the following command. This will run the application in "development" mode:

```
npm start
```

A browser window should open, showing the application as it currently stands. When you're satisfied all is good, hit `Ctrl+C` to stop the application.

### **Exercise 3: Building and running the application in "production" mode**

In the Terminal window, in the `library-app` folder, run the following command. This will build the optimized application in "production" mode:

```
npm run build
```

Start a web server of your choice, then open a browser and browse to the home page of the optimized application. Verify all's good, then hit `Ctrl+C` to stop the web server.

### Exercise 4: Tidying up the application code

The Create React App tool generates a fairly nice starter application, but there's also stuff in there that we don't really need. Take a scalpel to the code and simplify things so that the web page looks like this:

